

**REMARKS**

In the present amendment, Applicants request that claims 1, 7, and 19 being amended, and claims 17 and 18 being cancelled. Reflecting the present amendment, claims 1-8, 10-16, and 19-21 are pending in the application, with claim 1 being the independent claim.

Applicants note that claim 1 has been amended to add the language that the material consists essentially of the recited compounds.

Furthermore, claim 7 has been amended to recite a pellet having a “circumferential shape and two side surfaces.”

**Response to Rejection under 35 U.S.C. § 112**

The Office Action rejects claims 7 and 8 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite, because the trihedral shaped pellet of originally filed claim 7 does not fall under the polyhedral shaped pellet of precedent claim 1. Moreover, the Office Action comments that “a cylindrical shape (claim 8) cannot form a trihedral shape.”

In response, Applicants note that claim 7 has been amended to recite a pellet with “a circumferential surface and two side surfaces,” which falls under the definition of the roughly polyhedral pellet as described in claim 1, and also conforms with the definition of a pellet “formed into a cylinder solid a part of which is cut off,” as recited in claim 8.

In view of the amendment to the claims, Applicants respectfully request withdrawal of the indefinite rejection under 35 U.S.C. § 112.

**Response to Rejection under 35 U.S.C. § 102(b) / 103**

The Office Action rejects claims 1-8 and 10-21 under 35 U.S.C. § 102(b) as allegedly being anticipated, and in the alternative, under 35 U.S.C. § 103(a) as allegedly being obvious over JP 2003-135583 to Hiraide (hereinafter “JP’583”) as evidenced by U.S. Patent No. 6,159,441 to Mohri et al. (hereinafter “MOHRI”).

Applicants respectfully traverse the rejection. In any event, Applicants submit that in order to advance prosecution and without expressing agreement with or acquiescence to the rejection, claim 1 has been amended to render the rejection moot.

Applicants note that present claim 1 is clearly directed to a different material than the invention disclosed in JP’583. JP’583 teaches a calcium-phosphate-resin complex constituted of calcium phosphate “firmly held by synthetic resin particles I and II”, see JP’583, paragraph [0010]. The required ratio of calcium phosphate and synthetic resin is in the range between 1 / 9 to 8 / 2. JP’583 further teaches that “if the content of the synthetic-resin particle II is less than 0.2% of the weight, complex cannot acquire sufficient stability to moisture,” whereby the 0.2% weight is based on the total quantity of the synthetic-resin particles I and II, see paragraph [0018]. The same teaching is emphasized in paragraph [0061], which discloses that because the synthetic-resin II functions as a binder and fills the openings between the particles, “the calcium phosphate synthetic-resin complex” is “excellent in the stability over moisture.”

The teaching in JP’583 leaves no doubt that the synthetic resin is an essential element of its material. The disclosure clearly teaches that the synthetic resin needs to surround and hold the calcium phosphate particles in order to provide stability. In contrast, the bone replacement material of the presently claimed invention consists essentially of calcium phosphate particles, but has the ability to provide sufficient strength against external stress.

Concerning the Examiner's assertion that JP'583 discloses a porosity of less than 75% of the disclosed material, Applicants respectfully disagree. JP'583 teaches in paragraph [0022] a desired porosity of the calcium phosphate material only with respect to the conditions that should apply to the starting material, before it is subjected to pressurized heat treatment with the resin particles. The porosity data mentioned in JP'583 cannot be applied to the final calcium phosphate resin complex. Accordingly, JP'583 fails to teach the porosity of the presently claimed invention, and it appears that the porosity of the calcium phosphate resin-complex, in view of the pressurized heat treatment, is not comparable with the presently claimed invention.

In view of the present amendments and above presented arguments, Applicants note that JP'583 fails to teach or suggest all of the elements of the presently claimed invention. Moreover, JP'583 clearly teaches away from the presently claimed invention, and someone of ordinary skill in the art would not be guided or motivated by the disclosure of JP'583 to make a bone replacement material with sufficient strength and shock resistance without the use of resin particles and in accord with the presently claimed invention.

Concerning the obviousness over JP'583 in view of MOHRI with regard to claims 2-8 and 14, Applicants respectfully note that claims 2-8 and 14 depend ultimately from claim 1 and are patentable for at least the same reason that claim 1 is patentable over JP'583. MOHRI merely teaches a process of making  $\alpha$ -alumina powder with substantial octahedral or eicosahedral shape. MOHRI does not teach the deficiency of JP'583, neither provides any motivation or suggestion to lead to the presently claimed invention.

In view of the above, Applicants respectfully request withdrawal of the rejections under 102(b)/103(a).

## **Response to the Double Patenting Rejection**

The Office Action rejects claims 1-21 on the ground of nonstatutory obviousness-type double patenting over claims 1-11 of U.S. Patent No. 7,238,209 to Matsuzaki (hereinafter "MATSUZAKI") in view of JP'583.

In response, as pointed out above, in order to advance prosecution and without expressing agreement with or acquiescence to the rejection, claim 1 has been amended to render the rejection moot.

In describing MATSUZAKI, the Examiner admits that MATSUZAKI does not teach "that the material has a porosity of  $\leq 75\%$ ." Applicants further note, as pointed out above, JP'583 does not teach that the disclosed calcium phosphate resin-complex has a porosity of less than 75%. The teaching in JP'583, paragraph [0022] clearly relates to the starting material, as stated above, before the calcium phosphate-resin complex is formed by pressurized heat treatment.

Accordingly, the combination of MATSUZAKI and JP'583 does not lead to or suggest the presently claimed invention, wherefore withdrawal of the double patenting rejection is respectfully requested.

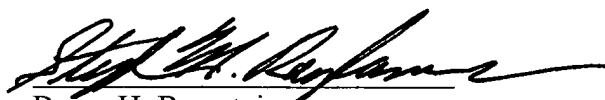
## **CONCLUSION**

In view of the foregoing amendments and remarks, the Examiner is respectfully requested to reconsider and withdraw the rejections of record, and allow each of the pending claims.

Attorney Docket No. P30093

If any issues yet remain which can be resolved by telephone, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,  
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